

5-2 Skills Practice**Inequalities and Triangles**

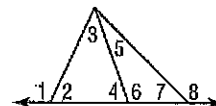
Determine which angle has the greatest measure.

1. $\angle 1, \angle 3, \angle 4$

2. $\angle 4, \angle 5, \angle 7$

3. $\angle 2, \angle 3, \angle 6$

4. $\angle 5, \angle 6, \angle 8$



Use the Exterior Angle Inequality Theorem to list all angles that satisfy the stated condition.

5. all angles whose measures are less than $m\angle 1$

$\angle 2, \angle 3, \angle 4, \angle 5, \angle 7, \angle 8$

6. all angles whose measures are less than $m\angle 9$

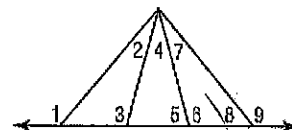
$\angle 7, \angle 6, \angle 4, \angle 2$

7. all angles whose measures are greater than $m\angle 5$

$\angle 3, \angle 1$

8. all angles whose measures are greater than $m\angle 8$

$\angle 5, \angle 3, \angle 1$



Determine the relationship between the measures of the given angles.

9. $m\angle ABD, m\angle BAD$

$39 \quad 35$

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10. $m\angle ADB, m\angle BAD$

$23 \quad 39$

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11. $m\angle BCD, m\angle CDB$

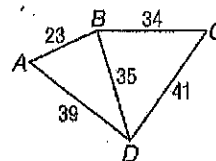
$35 \quad 34$

>

12. $m\angle CBD, m\angle CDB$

$41 \quad 34$

>



Determine the relationship between the lengths of the given sides.

13. $\overline{LM}, \overline{LP}$

$59 \quad 83$

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14. $\overline{MP}, \overline{MN}$

$77 \quad 44$

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15. $\overline{MN}, \overline{NP}$

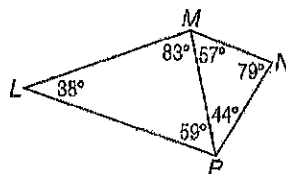
$41 \quad 57$

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16. $\overline{MP}, \overline{LP}$

$78 \quad 83$

<



5-2

Practice

Inequalities and Triangles

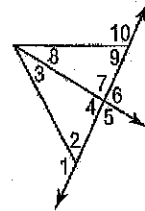
Determine which angle has the greatest measure.

1. $\angle 1, \angle 3, \angle 4$

2. $\angle 4, \angle 8, \angle 9$

3. $\angle 2, \angle 3, \angle 7$

4. $\angle 7, \angle 8, \angle 10$



Use the Exterior Angle Inequality Theorem to list all angles that satisfy the stated condition.

5. all angles whose measures are less than $m\angle 1$

$$\angle 4, \angle 7, \angle 8, \angle 3, \angle 5$$

6. all angles whose measures are less than $m\angle 3$

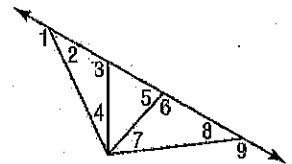
$$\angle 5, \angle 7, \angle 8$$

7. all angles whose measures are greater than $m\angle 7$

$$\angle 9, \angle 5, \angle 3, \angle 1$$

8. all angles whose measures are greater than $m\angle 2$

$$\angle 6, \angle 9$$



Determine the relationship between the measures of the given angles.

9. $m\angle QRW, m\angle RWQ$

$$34 < 47$$

10. $m\angle RTW, m\angle TWR$

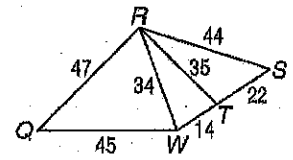
$$34 < 35$$

11. $m\angle RST, m\angle TRS$

$$35 > 22$$

12. $m\angle WQR, m\angle QRW$

$$34 < 45$$



Determine the relationship between the lengths of the given sides.

13. $\overline{DH}, \overline{GH}$

$$32 > 29$$

14. $\overline{DE}, \overline{DG}$

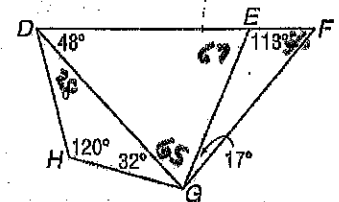
$$65 < 67$$

15. $\overline{EG}, \overline{FG}$

$$50 < 113$$

16. $\overline{DE}, \overline{EG}$

$$65 > 48$$



17. **SPORTS** The figure shows the position of three trees on one part of a Frisbee™ course. At which tree position is the angle between the trees the greatest?

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